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09/361,700	07/27/1999	PIERRICK DESCURE	S1022/8201	5850

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EXAMINER

MUNSON, GENE M

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

361,700

Applicant(s)

P. DESCURE

Examiner

G. MUNSON

Group Art Unit

2811

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 6 JANUARY 2003
- ☒ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-19, 27-30 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-19, 27-30 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 19
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2811

Claims 28-30 are rejected under 35 U.S.C. 112, first and second paragraphs. The scope of the "sub-array" is unclear because these claims appear to contradict claim 1 which has the "same sub-array being coated with a same interference filter". These claims do not agree with Figure 2C which shows three different "interference filters" for three "sub-arrays" with three groups of regions 1R, 1G, 1B. So one "sub-array" 1R would be sensitive to red; one "sub-array" 1G would be sensitive to green; one "sub-array" 1B would be sensitive to blue. See specification, page 3.

The claims are considered insofar as a possible scope is understandable.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2811

Claims 1-6, 8, 12-15, 17 and 28-30 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al. See Figure 2, column 4, lines 4-7, 46-52. Since Koike et al (column 4, lines 4-7, 46-52) teach to have conductive films fixed to a predetermined voltage which may be ground potential, it would have been obvious to have the substrate 1 at ground potential and the conductive film electrodes 13 (Figure 2) either connected to the substrate 1 or via a fixed potential (claim 2). The “interference filter” insofar as claimed reads on “silicon oxide” layer 12R, 12G, 12B and “polysilicon” layer 13. The claims remain broad in scope. The different thickness of insulating layers (claims 28-30) in Figure 2C of this application are shown by different thickness of insulating layers in Figure 2 of Koike et al.

Claims 1, 4, 6, 12, 13 and 17 are rejected under 35 U.S.C. 102 as unpatentable as shown by Nagasaki et al. See Figures 1, 3. A “photodiode” made of a “region” (claim 1) and “region” (claims 12, 17) read on region 2; the “interference filter” insofar as claimed reads on “insulating” layer 4 and “conductive” layer 9 or 21. The claims remain broad in scope.

Claim 19 is rejected under 35 U.S.C. 102 as unpatentable as shown by Baji et al or Merrill et al ‘683 or Merrill ‘282 or Merrill ‘744. See Figure 3 of Baji et al; Figure 1 of Merrill et al ‘683; Figures 3A, 5 of Merrill ‘282; Figures 3, 5 of Merrill ‘744. In Figure 3 of this application, photodiode D_{ij} corresponds to photodiode 1 of Baji et al, photodiode region 18 of Merrill et al ‘683, photodiode 301 of Merrill ‘282, photodiode d1 of Merrill ‘744; “precharge” transistor P_{ij} corresponds to transistor 24 of Baji et al, transistor 20 of Merrill et al ‘683, transistor 302 of Merrill ‘282, transistor m1 of Merrill ‘744; “amplifying” transistor T_{ij} corresponds to transistor 20 of Baji et al, transistor 22

Art Unit: 2811

of Merrill et al '683, transistor 303 of Merrill '282, transistor m2 of Merrill '744; "reference" voltage VR corresponds to positive voltage supply 25 of Baji et al, voltage VCC of Merrill et al '683, voltage V_{CC} of Merrill '282, voltage V_{CC} of Merrill '744; "row" line R_i corresponds to line 26 of Baji et al, RST1 line of Merrill et al '683, RESET line 92 of Merrill '282, reset line 20 of Merrill '744; "column" line C_j corresponds to the column at 30 of Baji et al, a column line connected to an amplifier 14 of Merrill et al '683, a column line 90(1) of Merrill '282, line 40 of Merrill '744.

Claim 27 is rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection, considered together with Merrill '744. It would have been obvious to have photodiodes as in Koike et al (Figure 2), in a well region as suggested by Merrill (Figure 7) with a "base substrate" similar to region 50 of Merrill, in order to provide isolation for the photodiodes.

Claims 11 and 18 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection of claim 17, further considered together with Nagano. For a connection of an electrode as in Koike et al (Figure 2) to a substrate, it would have been obvious to use a "heavily" doped region, as in Nagano (Figure 3, region 5a), in order to provide a low resistance ohmic contact region for the connection.

Claims 11 and 18 are rejected under 35 U.S.C. 103 as unpatentable over Nagasaki et al, as in the above rejection of claim 17, considered together with Nagano, applied as in the above rejection.

Claims 12, 17, 18 and 27 are rejected under 35 U.S.C. 102 as unpatentable as shown by Motojima et al. See Figure 5. The "interference filter" insofar as claimed reads on "insulating" layer 6₂ and "conductive" layer 4. The "conductive portion" includes wiring 5a.

Art Unit: 2811

Claims 7, 9, 10 and 16 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection of claims 1, 8 and 15, further considered together with Motojima et al. It would have been obvious to use a silicon nitride layer, as in Motojima et al (Figure 5, layer 8; column 3), over electrodes 13 of Koike et al (Figure 2) in order to provide passivation.

Claim 7 is rejected under 35 U.S.C. 103 as unpatentable over Nagasaki et al, as in the above rejection of claim 1, further considered together with Motojima et al. It would have been obvious to use a silicon nitride layer, as in Motojima et al (Figure 5, layer 8; column 3), over “conductive” layer 9 or 21 of Nagasaki et al (Figures 1, 3) in order to provide passivation.

The references are all of record.

The arguments in the response, filed 6 January 2003, have been considered but are not persuasive. Contrary to the response (6-12, 15), the *claimed* structure of the “interference filter” still does not distinguish over the same structure in Koike et al, Nagasaki et al and Motojima et al, which all disclose the claimed “conductive” layer over an “insulating” layer. Applicant’s “difficulty lies in the breadth of the claims.” *In re Sovish*, 226 USPQ 771, 774 (CAFC 1985). Contrary to the response (pages 6-7, 9, 11, 15), claims 1, 12, 17 and 27 do not preclude an optical filter in Koike et al. Contrary to the response (pages 6, 9, 11), Koike et al (column 4) do suggest that the electrodes are at a fixed potential, including ground potential. Contrary to the response (pages 8, 9, 11-12), the *claimed* “region” does not distinguish over region 2 of Nagasaki et al, and “conductive” layer 9 is over region 2 *as claimed*. Contrary to the response (pages 10, 12, 15), Motojima et al need not mention the words “interference filter”, because this application is for a patent not a copyright, and

Art Unit: 2811

for the *claimed* “interference filter”, Motojima et al do show a “structure corresponding to *what is claimed.*” *In re Sovish*, 226 USPQ at 774.

Contrary to the response (pages 13-14), Baji et al, Merrill et al ‘683, Merrill ‘282 and Merrill ‘744 each do show the claimed circuit of claim 19. Contrary to the response (page 13), in the circuit in Figure 3 of Baji et al, the drain of n-channel transistor 24 is connected to positive voltage supply 25, so the source of n-channel transistor 24 is connected to the cathode of photodiode 1. Note that a drain of a n-channel transistor perforce is connected to a positive voltage supply. Contrary to the response, claim 19 does not preclude transistor 2 of Baji et al, nor transistor 24 of Merrill et al ‘683, nor transistor 304 of Merrill ‘282, nor transistor m3 of Merrill ‘744.

No claim is allowed.

This action is **FINAL**.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee of appropriate amount

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal

Art Unit: 2811

requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing, whichever is longer, of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Munson
(703) 308-4925 or 0956

01/30/03



**GENE M. MUNSON
EXAMINER
GROUP ART UNIT 2811**